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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,775	05/04/2005	Hilbrand Klaver	TS1253 US	7943
23632	7590	11/04/2009		
SHELL OIL COMPANY				
P O BOX 2463				
HOUSTON, TX 772522463				
EXAMINER				
NGUYEN, CAM N				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
11/04/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,775

**Applicant(s)**

KLAVER ET AL.

**Examiner**

Cam N. Nguyen

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07/02/09 (an amendment/response & T.Ds).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-10 and 17-20 is/are pending in the application.  
4a) Of the above claim(s) 1-5 and 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-10 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Response to Amendment**

1. The amendment filed on 07/02/09 has been made of record and entered. Claims 6-7 & 9 have been amended.

Claims 1-20 are currently pending in this application.

**Status of Withdrawn Claim(s)**

2. This application contains claims 1-5 & 11-16 are drawn to an invention nonelected with traverse in the reply filed on 11/04/08. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

**Terminal Disclaimer**

3. The terminal disclaimers filed on 07/02/09 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Application Serial No. 10/517,098 and US Pat. 7,198,845 have been reviewed and are accepted. The terminal disclaimer has been recorded.

**Claim Rejections - 35 USC § 102(b)**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A. Claims 6-10 & 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Frayer et al., hereinafter referred to as "*Frayer '777*", (US Pat. 4,133,777).

*Frayer '777* discloses a hydrodesulfurization catalyst comprising Group VI and Group VIII metals with a promoting amount of Group IV-B metal on a non-cracking support, etc., the particles of the catalyst comprising elongated extrudates, which show in cross-section at least one groove defining protrusions and an average concavity index between 1.01 and 1.35, the shortest distance between the depth of said at least one groove and the center in said cross-section being between 1/30 and 1/20 inch (see col. 13, claim 1). The particles have a plurality of alternating longitudinal grooves and protrusions (see col. 13, claim 2). The non-cracking support is alumina (see col. 14, claim 9). The diameter of the catalyst particle is twice the shortest surface-to-central axis dimension (see col. 2, ln 60-62). See also entire reference for further details.

It is inherent that the disclosed catalyst would possess all of characteristics as being required in the instant claim 6 because the catalyst is the same.

B. Claims 6-10 & 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by *JP '445*, (JP 55119445).

*JP '445* discloses desulfurization catalysts comprising hydrogenation components on porous alumina which are made into columnar bodies, wherein 3-6 circles of the same diameter as that of the central circle are disposed around the circle of diameters about 0.4-5 mm in cross-section at an equal angle, the center-to-center distance of the central circle and circumferential circles is made about 1/4-3/4 of the diameter of the central circle, etc. (see Abstract).

The claimed shaped catalyst does not appear to patentably distinguish from the disclosed catalyst. Thus, the claims are anticipated by the teaching of the reference.

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 17 & 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Frayer et al., hereinafter referred to as "***Frayer '777***", (US Pat. 4,133,777).

***Frayer '777*** discloses a hydrodesulfurization catalyst as described above, except for the properties recited in the instant claim 17 and the titania carrier recited in the instant claim 20.

Regarding claim 17, the disclosed catalyst has a diameter "twice" the diameter of the central axis instead of "between 0.87 to 1.15 times" that the claim requires. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have shaped the catalyst into the desired shapes, sizes, diameters, lengths, and dimensions, etc. in order to achieve the desired catalyst structure because they are results effective variables, in view of *In re Boesch*.

Regarding claim 20, while ***Frayer '777*** does not disclose "titania" carrier, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the alumina support of ***Frayer '777*** with a titania support or carrier because titania is a known and useful catalyst support material.

**Response to Applicants' Arguments**

6. The remarks filed on 07/02/09 have been fully considered, but not deemed persuasive because of the following reasons.

The claimed shaped catalyst or catalyst precursor does not appear to distinguish from the catalysts disclosed by Frayer '777 and JP '445 because both of the references teach that their catalysts have the same number of protrusions and the description of the cross-section of the protrusions appear to be the same as in the claimed catalyst. Thus, the rejections are maintained.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Conclusion**

8. Claims 1-20 are pending. Claims 6-10 & 17-20 are rejected. Claims 1-5 & 11-16 are withdrawn due to nonelected (distinct) invention(s). No claims are allowed.

**Contacts**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner CAM N. NGUYEN, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Primary Examiner

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/C. N. N./

November 03, 2009